DOCUMENT RESUME

ED 482 143 IR 058 814

AUTHOR	Barbanell, Patricia; Falco, John; Newman, Diana
TITLE	New Vision, New Realities: Methodology and Mission in Developing Interactive Videoconferencing Programming.
PUB DATE	2003-00-00
NOTE	8p.; In: Museums and the Web 2003: Selected Papers from an International Conference (7th, Charlotte, NC, March 19-22, 2003); see IR 058 801.
AVAILABLE FROM	For full text: http://www.archimuse.com/mw2003/papers/barbanell/barbanell.html/.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Computer Assisted Instruction; Cooperative Programs; *Museums; Partnerships in Education; Program Development
IDENTIFIERS	Digital Communications; Interactive Exhibits; *Interactive Systems; *Video Teleconferencing

ABSTRACT

As museums throughout the world enter the interactive arena of digital communications, a need has emerged to access strategies of program development that seamlessly interface with existing missions and resources. This paper describes how Project VIEW, a US Department of Education Technology Innovation Challenge Grant, collaborates with major museums--the Guggenheim (NY) Museum, the Whitney Museum,the Philadelphia Museum of Art, and others--to create templates for developing point-to-point interactive video conferences with asynchronous web-based resources that enhance student learning. Underlying the work of VIEW is the premise that, to achieve the promise of interactive technologies, it is necessary to change educational pedagogy. To accomplish this, Project VIEW employs multi-phase integration techniques that bring together the needs and missions of diverse yet intersecting educational delivery systems at museums and schools. While the development of a model for sustainable program development and content integration a core component of Project VIEW, the primary goal is to deliver instruction that produces evidence of higher student learning and academic performance. Interim evaluation by an external reviewer indicates evidence of enhanced student learning among students who participate in Project VIEW programs. Importantly, evidence confirms that outcomes for students are the result of VIEW training and development processes in which both schools and museums are transforming the way that they deliver education and through integrated, interactive videoconferencing and web-based learning. (Author)

Reproductions supplied by EDRS are the best that can be made
from the original document.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

D. Bearman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

PAPERS
Museums and the Web 2003

New Vision, New Realities: Methodology And Mission In Developing Interactive Videoconferencing Programming

Dr. Patricia Barbanell, Dr. John Falco, Schenectady City School District, and Dr. Diana Newman , State University at Albany, USA

ED 482 143

Register
Workshops
Sessions
Speakers
Interactions
Demonstrations
Exhibits
Events
Best of the Web
Key Dates
Charlotte

A&MI
Archives & Museum Informatics
158 Lee Avenue
Toronto Ontario
M4E 2P3 Canada

ph: +1 416-691-2516
fx: +1 416-352-6025

info@archimuse.com
www.archimuse.com

Search A&MI

Join our Mailing List.
Privacy.

Updated: March 13, 2003

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

http://www.projectview.org

Abstract

As museums throughout the world enter the interactive arena of digital communications, a need has emerged to access strategies of program development that seamlessly interface with existing missions and resources. This paper describes how Project VIEW, a US Department of Education Technology Innovation Challenge Grant, collaborates with major museums - the Guggenheim (NY) Museum, the Whitney Museum, the Philadelphia Museum of Art, and others - to create templates for developing point-to-point interactive videoconferences with asynchronous web-based resources that enhance student learning. Underlying the work of VIEW is the premise that, to achieve the promise of interactive technologies, it is necessary to change educational pedagogy. To accomplish this, Project VIEW employs multi-phase integration techniques that bring together the needs and missions of diverse yet intersecting educational delivery systems at museums and schools. While the development of a model for sustainable program development and content integration a core component of Project VIEW, the primary goal of VIEW is to deliver instruction that produces evidence of higher student learning and academic performance. Interim evaluation by an external reviewer (The Evaluation Consortium, University at Albany, State University of New York) indicates evidence of enhanced student learning among students who participate in Project VIEW programs. Importantly, evidence confirms that outcomes for students are the result of VIEW training and development processes in which both schools and museums are transforming the way that they deliver education and through integrated, interactive videoconferencing and web-based learning.

Keywords: Interactive Videoconferencing; Pedagogy; Collaborative Development; Constructivist Activities; Mission alignment

Introduction

Project VIEW, based in the Schenectady City School District, NY, is midway through a federal technology innovative challenge grant that is changing the way that Museum Educators and Schools interface in the classroom. To accomplish this, Project VIEW has effectively created a consortium of over 500 demographically varied school districts and diverse, content-rich education providers from across the nation who are pursuing a shared common goal: To develop and use interactive educational programs that expand traditional school communities and bring unique resources to students who may not otherwise have access to them.

From its inception, Project VIEW has recognized the critical need to prepare students with the high degree of literacy needed to succeed in the 21st Century information age (Project View, 1999). To meet this need, Project VIEW has built a constructivist inquiry-based environment for developing innovative educational

IR058814

BEST COPY AVAILABLE

resources.

VIEW utilizes the unique expertise of both museums and participating teachers to create content which facilitates seamless integration of video programming and supporting web-based resources into curriculum delivery. Participating museum educators and teachers are merging their educational methodologies into a student-centered, constructivist reality in which literacy is built on multi-media foundations, and individual learners create meaning from digital content formats. (Meuwissen & Geehan, 2001) What follows in this paper is a brief overview of the VIEW model and preliminary data on the effectiveness of the model for both schools and museums.

PHASE 1 - ESTABLISHING A FOUNDATION FOR PROGRAM DEVELOPMENT.

There are multiple components that are essential for engaging in the VIEW Development process. These components are not linear but rather occur in a constructivist environment, emerging both in real time and asynchronously, as needed.

Program Prerequisites

VIEW has identified four essential components needed for the development of all programs — collaborating teams, multi-disciplinary instructional expertise, internal institutional commitment, and content standards alignment. These components are constructed on the firm foundation of evidence and experience documented in the Schenectady City School District formal program evaluations (Evaluation Committee, Title III, 1997-2002) .

- ***Collaborating teams***: In developing programs, study has shown that collaborating building-based teams of at least 3 or 4 teachers are required to create a sustainable community of users. Three or four teachers in a single location can support each other and disseminate the program to their peers. Further, they are likely to continue to engage with a program with energy even if one team member moves on to another location.

- ***Multi-disciplinary instructional expertise***: Including multiple curriculum areas in building a team is an important requisite for program success because our experience has shown that such content diversity creates a breadth of vision and usability in programs that facilitates sustainability. In addition, the curriculum products and models created by multi-disciplinary teams have broader and deeper applicability for use in a variety of settings.

- ***Content provider institutional commitment and synergy***: It its essential that development of interactive videoconferencing programs and supporting content be aligned with the mission and expertise of the content provider. Without this important requirement, the program will have no roots or continuity within the institution, and would most likely lack the content underpinning which forms the core of a successful project.

- ***Content standards alignment***: Alignment with content standards is essential if a program is to offer substance that supports and expands classroom mission and practice. Furthermore, in order for schools to continue to participate in programs, the programs must meet mandated educational needs.

Pre-Development Preparation and Planning

Before proceeding with development, VIEW requires a series of collaborative planning sessions to ensure that an adequate foundation for development exists.

These sessions are designed to create a basis through which a program can be constructed. Focus for such sessions (as needed) may include:

- ***Capacity and connectivity of the provider and/or participating classrooms***: The core of the VIEW model is built on a philosophical and pedagogical foundation for interactive and sustainable interactive videoconferencing and web usage. In designing programs that facilitate engagement with interactive technology, it is essential for all partners to have a baseline technological capacity (hardware, software and connectivity) to fully participate in the development process. To ensure that the infrastructure is in place for all participants, Project VIEW staff meets separately, through a Collaborative Visioning process, with provider and school technical staff to identify equipment and connectivity needs, and to fill baseline gaps where they are identified.

- ***Training and experience of participating provider and school staff:*** While VIEW programs are created so that they can be expanded and/or solidified as technology and technological skills improve, it is crucial that all participants in development have an essential baseline of training and experience. Such basic technological literacy ensures that participants can fully contribute to the interactive process of creating content and delivery modes. To enable hands-on participatory development, VIEW facilitates a constructivist Collaborative Visioning process with participating teachers and museum staff. Technological learning tutorials are offered, as needed, to provide appropriate skills for content development. This process creates a self-motivated assessment and understanding of capacity and readiness among participants.

- ***Content focus aligned with provider institution mission, goals and collections:*** Prior to beginning the collaborative development, Project VIEW staff meets with the museum to establish a program content focus that is aligned with the provider institution. Programmatic options and preferences of the institution are reviewed, and a general focus for the program is collaboratively chosen. Target grade levels and possible curriculum specialties appropriate for the content are also suggested.

- It is essential that the content of the program be aligned with collections. Without this foundation, the program would be an empty shell, failing to utilize the unique capacities of the museum. In addition, it is necessary that content be aligned with institution mission and goals to make certain that it can be sustained over time. Such alignment helps to make it likely that the expertise and focus of the institutional programming will continue in the program content area and facilitate sustainability.

- ***Selection of teacher team members aligned with content focus:*** Project VIEW collaborates with schools to select participating teacher teams based on content focus, target grade levels and possible curriculum specialties. In this process, Project VIEW records suggestions from schools regarding content appropriateness, standards interface and teaching applicability. If necessary, Project VIEW meets with content provider to collaboratively consider comments and make adjustments are made to initial content focus, as appropriate.

- ***Pre-program orientation of teachers and/or provider staff:*** Pre-development orientation and/or introduction sessions are offered separately to participating teacher teams and provider staff. As needed, Project VIEW brings introductory presentations and videoconference demonstrations to participating sites to help establish the baseline of programmatic understanding needed to adequately participate in the development process.

Phase2: Exploring Content and Developing a Program

Developing project content and ensuring that the content is useful in enhancing education delivery are among of the central activities of Project VIEW. There are multiple components to these activities, and most of them occur in a sequential timeframe.

Content Immersion

Teachers and museum educators joining VIEW collaborations are expected to use their unique and diverse expertise in VIEW program development. Specifically, teachers are expected to be leaders in the area of classroom curriculum and school-based academic pedagogy, while museum personnel are expected to be specialists in the specific content areas of museum collections and archives (Note, (while this paper refers primarily to Museums and Museum education, Project VIEW has done its work with a spectrum of content providers including Museums, Zoos, Historical Societies and Libraries). Yet, as the Project VIEW model has developed, it has become apparent that when there is a constructivist blending and/or interface of the competencies of the participants and participating communities, the development of sustainable programming is more effective.

The constructivist blending is based on a theory that meaning more profound when it is constructed, not transmitted. Participants use their own expertise to collaborate with each other to construct methods and models based on intersecting missions and competencies.

To facilitate this process to the greatest degree for each project, the VIEW program development begins at the provider institution with a full day session of content immersion. Participating teachers receive an introduction to collection artifacts and resources from the content provider staff as well as an overview of the proposed program content focus. General responses and discussion of the applicability and utility of the content for classroom use take place and a basic framework for the program development is discussed. Teachers also reflect on grade-appropriateness of the proposed content focus, and relevance to learning standards and the curriculum.

Development Sessions

Constructivist Activities

Within two weeks of the ***Content Immersion*** session, participants come together again at the Project VIEW Laboratory to engage in a constructivist process that contributes to development of a replicable videoconference program with supporting resources and activities. Collaboratively, participants review the ***Content Immersion*** experience and begin to select key concepts that can expand and enhance student learning and achievement. Often during this phase of the development, the content focus narrows and tangential areas of exploration are tagged for program enrichment and/or exploratory study. Throughout this process, it is important to remember that "Different perspective, interpretations and criticism must be shared and creative conflicts (that lead to new discourse and new knowledge) must be engendered." (Jeffers 2003)

The process of creating the project varies from program to program, but a template for effective development methodology is emerging.

In its developing form the VIEW model includes the following:

- Facilitated constructivist discussion of all participant points of view on content applicability and presentation;
- Structural outline of videoconference presentation and identification of experiences and resources need to support and deliver the content; and
- Self evaluation of program and process and self assignment of specific tasks for independent work.

At the conclusion of the first three development sessions, participants identify areas of content that are needed for program completion and they collaboratively designate team members to gather and/or create that content.

Independent development by teachers and museums

Following the ***content immersion*** and ***development sessions***, participants and museum specialists spend the next 8 to 10 weeks pursuing their team designated development tasks. These tasks vary with the competencies and interest of the participants. In general, museum staff focuses on the collaboratively determined program content, gathering and sharing resources with participants, and authoring a videoconference presentation that enhances understanding of some key aspect(s) of the content. Teachers construct pre- and post-visit activities and resources to support the anticipated videoconference. All participants are encouraged to use technology to interact digitally with each other and to share and pilot parts of the program as they are developed.

Reflection and Completion of Development

After the independent component of the collaboration, the teams are reassembled for a final two days. They conduct a review of their collective efforts including revisiting their goals and evaluating the results of their independent work (curriculum, resources, lesson plans, etc.). The content provider presents the videoconference that they have created and teachers critique it. Gaps in the program are identified and the group collectively works to fill them as appropriate. VIEW criteria for high quality programs are emerging as a result of this process. Benchmarks for program excellence are currently being created. However, early review suggests the following may central be among them:

- Seamless curriculum interface;
- Effective use of interactive media;
- Strong use of supporting interactive technologies;
- Alignment of program elements with institutions missions.

At the conclusion of the two days, participants schedule test dates with the provider for field testing the program in the classroom.

Phase 3: Field Testing of Program

An important component of Project VIEW is to provide an educational reality for laboratory field testing of programs that are developed. This occurs in two stages.

Field Testing with Participating Program Developers

Following the development phase, programs are piloted in the schools of the teachers who helped develop them. Imbedded in those pilots are a commitment among all participants to provide constructive feedback on the effectiveness of the program in the classroom with students. After responses are gathered, the provider is charged with retooling and/or revising programs as needed.

Field Testing with VIEW Trainees

The second stage of field testing takes place in the context of training sessions conducted by project VIEW staff to prepare teachers to be users and consumers of the programs that are developed. As teachers learn how design integrated classroom modules using interactive video programs and technologies, they are charged with piloting the programs developed by VIEW collaborations. Their commitment includes developing integration plans for their classrooms and providing candid responses regarding the effectiveness and utility in the classroom of the programs. The feedback is shared with the providers and the process of improving programs continues.

Phase 4: Assessing Progress and Moving Forward

Key to reaching and validating Project VIEW goals is the constant reflection on and realignment of components of the project. To engage in this process, Project View is involved in a continuing multiphase, mixed-methodology evaluation which includes both formative and summative evaluation constructs.

Formative Evaluation

Part of the evaluation is integrally woven into the evolution of the VIEW models on an on-going basis. Reflections and findings of the evaluators are discussed and integrated into evolution of the development models and program structures. Reflections on methodology and content integration occur on a regular basis and have resulted in the following outcomes (Newman, D.L., Smith, J. & Geehan, M.M., 2000).

- More effective organization of development model procedures to allow for different teaching styles of participants including structural integration of interactive collaborative planning and delivery of programs and mission alignment between school and museum educators.
- More effective documentation of curriculum projects through a better organized web representation that includes pre- and post- program activities and resources to enhance videoconference content.

Summative Evaluation

Summative evaluation has helped to create benchmarks of achievement and signposts of productive directions. Among the trends beginning to emerge are the following findings:

- Increasingly, museum personnel appreciate videoconferencing as not something that is in competition with the museum, but something that supports current museum efforts.

- Participating schools perceive that educational videoconferencing serves to benefit students in their classrooms by increasing their access to authentic and exceptional resources, from historic and scientifically unique locales and classrooms in other areas to experts in various fields and celebrated artifacts.

Concluding Comments

VIEW's emerging model of collaborative development is changing the way that both museums and schools deliver content in the classroom. By creating a process to merge discrete missions and goals of participating institutions, Project VIEW has achieved success in designing and modeling key components required to establish a productive interactive multimedia collaboration among museums and schools. The constraints of schoolhouse walls are melting away as programs reach out to bring museum expertise into the classroom through interactive videoconferencing.

Using interactive videoconference programs and supporting web-based resources, VIEW makes new and innovative use of museum expertise and collections while structuring content delivery so that it can be seamlessly integrated into curriculum delivery. Museums are realigning their content presentation to interface and enhance classroom curriculum presentation and content requirements. The result is a new, emerging reality in classroom pedagogy and a new, exciting extension of interpretive activities of museums.

References

The Evaluation Consortium, Evaluation reports of New York State Title III Literacy Challenge Grants, Schenectady City School District, NY (1997-2002).

Carole Jeffers, *Art Education*, Jan. 2003, p. 21

Innovation Challenge Grant 1999

Meuwissen, K.W. & Geehan, M.M. (2001). Creating a Model for Educational Videoconferencing: Three Approaches to Developing Videoconference Products and Related Curricula. A paper at the 15th Annual Edward F. Kelly Evaluation Conference, Toronto, Canada, 2001.

Newman, D.L., Smith, J. & Geehan, M.M.,(2000), Systems change in the human service domain: A model for documenting and evaluating change. A paper presented at the 2000 American Evaluation Association Annual Meeting Honolulu, HI

New York State Title III Literacy Challenge Grants, Schenectady City School District, NY (1997-2002).

Project View, Grant Proposal, "Proposal Significance" p.3-4 Project No. R303A000002, Federal Technology

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

X	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").